

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Assistant Commissioner of Patents,
Washington, D.C. 20231, on May 27, 1998
TOWNSEND AND TOWNSEND AND CREW LLP

By Hyacinth L. Motegana

PATENT

Attorney Docket No. 015389-002950US



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:)	
)	
Thomas R. Cech et al.)	Examiner: Not Assigned
)	
Serial No.: 08/974,584)	Art Unit: 1643
)	
Filed: November 19, 1997)	
)	INFORMATION DISCLOSURE
For: TELOMERASE REVERSE)	STATEMENT UNDER
TRANSCRIPTASE)	<u>37 C.F.R. § 1.97 and § 1.98</u>
)	

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

RECEIVED

JUN 2 1998

MAIL ROOM
SERVICES

Enclosed for filing in the above-referenced application is a copy of the Form PTO-1449, submitted under 37 C.F.R. § 1.97 and § 1.98, relating to the parent application U.S. Application Serial No. (USSN) 08/854,050, filed May 9, 1997, and related application USSN 08/724,643, filed October 1, 1996, both prior applications to which the above-referenced application claims priority. The references cited therein are incorporated by reference herein, pursuant to 37 C.F.R. § 1.98(d).

It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

The references listed in the form PTO Form-1449 are not being provided pursuant to 37 C.F.R. § 1.98(d). Copies of references listed on sheets 1 to 5 of the attached form PTO-1449 (references AA-EA) were previously submitted in prosecution of copending application

Thomas R. Cech et al.
Serial No.: 08/974,584
Page 2

U.S.S.N. 08/724,643. Copies of references listed on sheet 6 of the attached form PTO-1449 (references FA-FR) were previously submitted in prosecution of copending application U.S.S.N. 08/854,050. Applicants believe that no additional copies of the references are required to be submitted and that additional submission of references would be cumbersome for the Office; however, Applicants will provide additional copies at the request of the Examiner.

The relationship between the aforementioned U.S.S.N. 08/854,050, U.S.S.N. 08/724,643, and the present application is as follows:

The present application is a Continuation-In-Part application ("CIP") of PCT/US97/17618, filed October 1, 1997, and PCT/US97/17885, filed October 1, 1997, which are continuation-in-part applications of USSN 08/911,312, filed August 14, 1997, and USSN 08/912,951, filed August 14, 1997, and USSN 08/915,503, filed August 14, 1997, which are continuation-in-part applications of USSN 08/854,050, filed May 9, 1997, which is a continuation-in-part application of USSN 08/851,843, filed May 6, 1997, which is a continuation-in-part application of USSN 08/846,017, filed April 25, 1997, which is a continuation-in-part application of USSN 08/844,419, filed April 18, 1997, which is a continuation-in-part application of USSN 08/724,643, filed on October 1, 1996.

Applicants respectfully draw the Examiner's attention to the submission in copending application USSN 08/854,050 of a "Detailed Discussion of Most Closely Related References" which accompanied a "Petition to Make Special under 37 C.F.R. § 1.102(d)" filed in that application. Applicants believe that the references discussed in the "Detailed Discussion" are also related to the present application, and that the "Detailed Discussion" may be of assistance to the Examiner in the present case. For the Examiner's convenience, a copy of the "Detailed Discussion" submitted for USSN 08/854,050 is attached.

Applicants believe that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action on the merits. However, if a fee is required, the

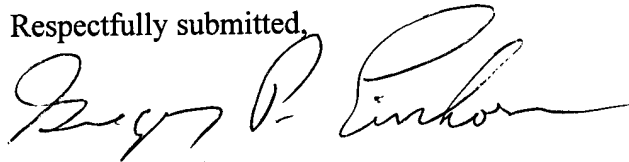
Thomas R. Cech et al.
Serial No.: 08/974,584
Page 3

PATENT

Commissioner is authorized to charge such fee to Deposit Account No. 20-1430. Please charge any additional fees or credit any overpayment to the above-noted Deposit Account.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (415) 576-0200 or Randolph T. Apple at (650) 326-2400.

Respectfully submitted,



Gregory P. Einhorn
Reg. No. 38,440

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, 8th Floor
San Francisco, CA 94111-3834
(415) 576-0200
Fax (415) 576-0300
email gpeinhorn@townsend.com

FORM PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary) (37 CFR § 1.98(b))				Attorney Docket No. 015389-002940 Applicant: Thomas R. Cech <i>et al.</i> Filing Date: 05/09/97		Serial No.: 08/854,050 Group Art Unit: 1806	
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	-------------------------------------------------------------------------------------------------------	--	------------------------------------------------	--

U.S. PATENT DOCUMENTS							
Examiner Initials		Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
	AA	3,817,837	06/18/74	Tanenholtz <i>et al.</i>	195	103.5	05/14/71
	AB	3,850,752	11/26/74	Schuurs <i>et al.</i>	195	103.5	10/29/71
	AC	3,939,350	02/17/76	Kronick <i>et al.</i>	250	365	04/29/74
	AD	3,996,345	12/07/76	Ullman <i>et al.</i>	424	12	06/30/75
	AE	4,275,149	06/23/81	Litman <i>et al.</i>	435	7	11/24/78
	AF	4,277,437	07/07/81	Maggio	422	61	12/10/79
	AG	4,366,241	12/28/82	Tom <i>et al.</i>	435	7	08/07/80
	AH	4,683,195	07/28/87	Mullis <i>et al.</i>	435	6	02/07/86
	AI	4,683,202	07/28/87	Mullis	435	91	10/25/85
	AJ	4,816,567	03/28/89	Cabilly <i>et al.</i>	530	387	04/08/83
	AK	4,965,188	10/23/90	Mullis <i>et al.</i>	435	6	06/17/87
	AL	5,583,016	12/10/96	Villeponteau <i>et al.</i>	435	91.3	10/27/94
	AM	5,489,508	02/06/96	West <i>et al.</i>	435	6	03/24/93

FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS							
		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation
							Yes No
	AN	WO 84/03564	09/13/84	PCT	G01N	33/54	

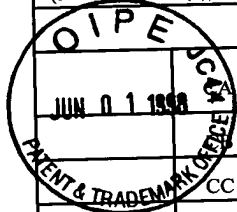
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)	
	AO Zakian, "Telomeres: Beginning to Understand the End," <i>Science</i> 270:1601 [1995];
	AP Blackburn and Gall, "A tandemly repeated sequence at the termini of the extrachromosomal ribosomal RNA genes in <i>Tetrahymena</i> ," <i>J. Mol. Biol.</i> , 120:33 [1978];
	AQ Oka <i>et al.</i> , "Inverted terminal repeat sequence in the macronuclear DNA of <i>Stylonychia pustulata</i> ," <i>Gene</i> 10:301 [1980];
	AR Klobutcher <i>et al.</i> , "All gene-sized DNA molecules in four species of hypotrichs have the same terminal sequence and an unusual 3' terminus," <i>Proc. Natl. Acad. Sci.</i> , 78:3015 [1981];
	AS Lingner <i>et al.</i> , "Telomerase RNAs of different ciliates have a common secondary structure and a permuted template," <i>Genes Develop.</i> , 8:1984 [1994];
	AT Biessmann <i>et al.</i> , "Addition of Telomere-Associated HeT DNA Sequences "Heals" Broken Chromosome Ends in <i>Drosophila</i> ," <i>Cell</i> 61:663 [1990];
	AU Sheen and Levis, "Transposition of the LINE-like retrotransposon TART to <i>Drosophila</i> chromosome termini," <i>Proc. Natl. Acad. Sci.</i> , 91:12510 [1994];
	AV Kipling and Cooke, "Hypervariable ultra-long telomeres in mice," <i>Nature</i> 347:400 [1990];
	AW Starling <i>et al.</i> , "Extensive telomere repeat arrays in mouse are hypervariable," <i>Nucleic Acids Res.</i> , 18:6881 [1990];
	AX Shampay and Blackburn, "Generation of telomere-length heterogeneity in <i>Saccharomyces cerevisiae</i> ," <i>Proc. Natl. Acad. Sci.</i> , 85:534 [1988];
	AY Lustig and Petes, "Identification of yeast mutants with altered telomere structure," <i>Proc. Natl. Acad. Sci.</i> , 83:1398 [1986];
	AZ Sandell <i>et al.</i> , "Transcription of yeast telomere alleviates telomere position effect without affecting chromosome stability," <i>Proc. Natl. Acad. Sci.</i> , 91:12061 [1994];

Examiner: _____	Date Considered: _____
-----------------	------------------------

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

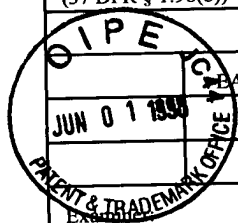
FORM PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: 015389-002940	Serial No.: 08/854,050
INFORMATIONAL DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary) (37 CFR § 1.98(b))		Applicant: Thomas R. Cech <i>et al.</i>	
		Filing Date: 05/09/97	Group Art Unit: 1806
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)			
	BA	Chen and Tye, "Organization of DNA sequences and replication origins at yeast telomeres," <i>Cell</i> 33:563 [1983];	
	BB	Wright <i>et al.</i> , "Saccharomyces telomeres assume a non-nucleosomal chromatin structure," <i>Genes Develop.</i> , 6:197 [1992];	
	BC	Gottschling and Cech, "Chromatin Structure of the Molecular Ends of Oxytricha Macronuclear DNA: Phased Nucleosomes and a Telomeric Complex," <i>Cell</i> 38:501 [1984];	
	BD	Blackburn and Chiou, "Non-nucleosomal packaging of a tandemly repeated DNA sequence at termini of extrachromosomal DNA coding for rRNA in <i>Tetrahymena</i> ," <i>Proc. Natl. Acad. Sci.</i> , 78:2263 [1981];	
	BE	Braunstein <i>et al.</i> , "Transcriptional silencing in yeast is associated with reduced nucleosome acetylation," <i>Genes Develop.</i> , 7:592 [1993];	
	BF	Makarov <i>et al.</i> , "Nucleosomal Organization of Telomere-Specific Chromatin in Rat," <i>Cell</i> 73:775 [1993];	
	BG	Tommerup <i>et al.</i> , "Unusual chromatin in human telomeres," <i>Mol. Cell. Biol.</i> , 14:5777 [1994];	
	BH	Watson, "Origin of concatemeric T7 DNA," <i>Nature New Biol.</i> , 239:197 [1972];	
	BI	J. Olovnikov, "A theory of marginotomy: The incomplete copying of template margin in enzymic synthesis of polynucleotides and biological significance of the phenomenon," <i>J. Theor. Biol.</i> , 41:181 [1973];	
	BJ	Henderson and Blackburn, "An overhanging 3' terminus is a conserved feature of telomeres," <i>Mol. Cell. Biol.</i> , 9:345 [1989];	
	BK	Wellinger <i>et al.</i> , "Saccharomyces Telomeres Acquire Single-Strand TG ₁₋₃ Tails Late in S Phase," <i>Cell</i> 72:51 [1993];	
	BL	Zahler and Prescott, "Telomere terminal transferase activity in the hypotrichous ciliate <i>Oxytricha nova</i> and a model for replication of the ends of linear DNA molecules," <i>Nucleic Acids Res.</i> , 16:6953 [1988];	
	BM	Lingner <i>et al.</i> , "Telomerase and DNA End Replication: No Longer a Lagging Strand Problem?," <i>Science</i> 269:1533 [1995];	
	BN	Yu <i>et al.</i> , "In vivo alteration of telomere sequences and senescence caused by mutated <i>Tetrahymena</i> telomerase RNAs," <i>Nature</i> 344:126 [1990];	
	BO	Singer and Gottschling, "TLC1: Template RNA Component of <i>Saccharomyces cerevisiae</i> Telomerase," <i>Science</i> 266:404 [1994];	
	BP	Autexier and Greider, "Functional reconstitution of wild-type and mutant <i>Tetrahymena</i> telomerase," <i>Genes Develop.</i> , 8:563 [1994];	
	BQ	Gilley <i>et al.</i> , "Altering specific telomerase RNA template residues affects active site function," <i>Genes Develop.</i> , 9:2214 [1995];	
	BR	McEachern and Blackburn, "Runaway telomere elongation caused by telomerase RNA gene mutation," <i>Nature</i> 376:403 [1995];	
	BS	Blackburn, "Telomerases," <i>Ann. Rev. Biochem.</i> , 61:113 [1992];	
	BT	Greider, "Telomere Length Regulation," <i>Ann. Rev. Biochem.</i> , 65:337 [1996];	
	BU	Greider, "Telomerase is processive," <i>Mol. Cell. Biol.</i> , 11:4572 [1991];	
	BV	Wellinger <i>et al.</i> , "Origin activation and formation of single-strand TG ₁₋₃ tails occur sequentially in late S phase on a Yeast linear plasmid," <i>Mol. Cell. Biol.</i> , 13:4057 [1993];	
	BW	Prescott, "The DNA of ciliated protozoa," <i>Microbiol. Rev.</i> , 58:233 [1994];	
	BX	Greenwood <i>et al.</i> , "Phylogenetic relationships within the class oligohymenophorea, phylum ciliophora, inferred from the complete small subunit rRNA gene sequences of <i>Colpidium campyllum</i> , <i>Glaucoma chattoni</i> , and <i>Opisthionecta henneguyi</i> ," <i>J. Mol. Evol.</i> , 3:163 [1991];	
	BY	Berger and Kimmel, <i>Guide to Molecular Cloning Techniques</i> , Meth. Enzymol., vol. 152, Academic Press, San Diego CA [1987];	
	BZ	CCaruthers <i>et al.</i> , "New chemical methods for synthesizing polynucleotides," <i>Nucleic Acids Res. Symp. Ser.</i> , 215-223 [1980];	
Examiner:		Date Considered:	
EXAMINER:		Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

FORM PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: 015389-002940	Serial No.: 08/854,050
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)		Applicant: Thomas R. Cech <i>et al.</i>	
		Filing Date: 05/09/97	Group Art Unit: 1806
(37 CFR § 1.98(b))			
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)			
		Horn <i>et al.</i> , "Synthesis of oligonucleotides on cellulose. Part II: design and synthetic strategy to the synthesis of 22 oligodeoxynucleotides coding for gastric inhibitory polypeptide (GIP)," <i>Nucleic Acids Res. Symp. Ser.</i> , 225-232 [1980];	
		Roberge, <i>et al.</i> , "A strategy for a convergent synthesis of N-linked glycopeptides on a solid support," <i>Science</i> 269:202 [1995];	
	CC	Creighton, <i>Proteins, Structures and Molecular Principles</i> , WH Freeman and Co, New York NY [1983];	
	CD	Sambrook <i>et al.</i> (1989) <i>Molecular Cloning, A Laboratory Manual</i> , Cold Spring Harbor Press, Plainview NY;	
	CE	Ausubel <i>et al.</i> (1989) <i>Current Protocols in Molecular Biology</i> , John Wiley & Sons, New York NY;	
	CF	Grant <i>et al.</i> , <i>Meth. Enzymol.</i> , 153:516-544 (1987);	
	CG	Scharf D <i>et al.</i> , "Heat stress promoters and transcription factors," <i>Results Probl. Cell Differ.</i> 20:125 [1994];	
	CH	Bitter <i>et al.</i> , "Expression and secretion vectors for yeast," <i>Meth. Enzymol.</i> , 153:516 [1987];	
	CI	Wigler <i>et al.</i> , "Transfer of purified herpes virus thymidine kinase gene to cultured mouse cells," <i>Cell</i> 11:223-32 [1977];	
	CJ	Lowy <i>et al.</i> , "Isolation of transforming DNA: Cloning the hamster aprt gene," <i>Cell</i> 22:817 [1980];	
	CK	Wigler <i>et al.</i> , "Transformation of mammalian cells with an amplifiable dominant-acting gene," <i>Proc. Natl. Acad. Sci.</i> , 77:3567 [1980];	
	CL	Colbere-Garapin <i>et al.</i> , "A new dominant hybrid selective marker for higher eukaryotic cells," <i>J. Mol. Biol.</i> , 150:1 [1981];	
	CM	Murry, <i>In McGraw Hill Yearbook of Science and Technology</i> , McGraw Hill, New York NY, pp 191-196, [1992];	
	CN	Hartman and Mulligan, "Two dominant-acting selectable markers for gene transfer studies in mammalian cells," <i>Proc. Natl. Acad. Sci.</i> , 85:8047 [1988];	
	CO	Rhodes <i>et al.</i> , "Transformation of maize by electroporation of embryos," <i>Meth. Mol. Biol.</i> , 55:121 [1995];	
	CP	Hampton <i>et al.</i> , <i>Serological Methods a Laboratory Manual</i> , APS Press, St Paul MN [1990];	
	CQ	Maddox <i>et al.</i> , "Elevated serum levels in human pregnancy of a molecule immunochemically similar to eosinophil granule major basic protein," <i>J. Exp. Med.</i> , 158:1211 [1983];	
	CR	Merrifield, "Solid phase peptide synthesis. I. The synthesis of a tetrapeptide," <i>J. Am. Chem. Soc.</i> , 85:2149 [1963];	
	CS	Koehler and Milstein, "Continuous cultures of fused cells secreting antibody of predefined specificity," <i>Nature</i> 256:495-497 [1975];	
	CT	Kosbor <i>et al.</i> , "The production of monoclonal antibodies from human lymphocytes," <i>Immunol Today</i> 4:72 [1983];	
	CU	Cote <i>et al.</i> , "Generation of human monoclonal antibodies reactive with cellular antigens," <i>Proc. Natl. Acad. Sci.</i> , 80:2026-2030 [1983];	
	CV	Cole <i>et al.</i> , "The EBV-hybridoma technique and its application to human lung cancer," <i>Monoclonal Antibodies and Cancer Therapy</i> , Alan R Liss Inc, New York NY, pp 77-96 [1985];	
	CW	Orlandi <i>et al.</i> , "Cloning immunoglobulin variable domains for expression by the polymerase chain reaction," <i>Proc. Natl. Acad. Sci.</i> , 86:3833 [1989];	
	CX	Winter and Milstein, "Man-made antibodies," <i>Nature</i> 349:293 [1991];	
	CY	Huse <i>et al.</i> , "Generation of a large combinatorial library of the immunoglobulin repertoire in phage lambda," <i>Science</i> 246:1275 [1989];	
	CZ	Melby <i>et al.</i> , "Quantitative measurement of human cytokine gene expression by polymerase chain reaction," <i>J. Immunol. Meth.</i> , 159:235 [1993];	
Examiner:		Date Considered:	
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			



FORM PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: 015389-002940	Serial No.: 08/854,050
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)		Applicant: Thomas R. Cech <i>et al.</i>	
		Filing Date: 05/09/97	Group Art Unit: 1806
(37 CFR § 1.98(b))			
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)			
	DD	Duplaa <i>et al.</i> , "Quantitative analysis of polymerase chain reaction products using biotinylated dUTP incorporation," <i>Anal. Biochem.</i> , 212:229 [1993];	
		Price, <i>Blood Rev.</i> , 7:127 [1993];	
		Trask, "Fluorescence <i>in situ</i> hybridization: applications in cytogenetics and gene mapping," <i>Trends Genet</i> 7:149 [1991];	
	DE	Verma <i>et al.</i> , <i>Human Chromosomes: A Manual of Basic Techniques</i> , Pergamon Press, New York NY [1988];	
	DF	1994 Genome Issue of Science (265:1981f);	
	DG	Hudson <i>et al.</i> , "An STS-based map of the human genome," <i>Science</i> 270:1945 [1995];	
	DH	Whitehead Institute/MIT Center for Genome Research, Genetic Map of the Mouse, Database Release 10, April 28, 1995;	
	DI	Nielsen <i>et al.</i> , "Peptide nucleic acids (PNAs): Potential antisense and anti-gene agents," <i>Anticancer Drug Des.</i> 8:53-63 [1993];	
	DJ	Dieffenbach and Dveksler, <i>PCR Primer, a Laboratory Manual</i> , Cold Spring Harbor Press, Plainview NY [1995];	
	DK	Anderson and Young, "Quantitative Filter Hybridization," in <i>Nucleic Acid Hybridisation</i> pp 73-111 (1985);	
	DL	Coombs, <i>Dictionary of Biotechnology</i> , Stockton Press, New York NY [1994];	
	DM	Swanton <i>et al.</i> , "Arrangement of Coding and Non-coding Sequences in the DNA Molecules Coding for rRNAs in <i>Oxytricha</i> sp.," <i>Chromosoma</i> 77:203 [1980];	
	DN	Bradford, "A Rapid and Sensitive method for the Quantitation of Microgram Quantities of Protein Utilizing the Microgram Quantities of Protein Utilizing the Principle of Protein-Dye Binding," <i>Anal. Biochem.</i> , 72:248 [1976];	
	DO	Zaug <i>et al.</i> , "Catalysis of RNA Cleavage by a Ribozyme Derived from the Group I Intron of <i>Anabaena</i> Pre-tRNA ^{Leu} ," <i>Biochemistry</i> 33:14935 [1994];	
	DP	Lamond and Sproat, "Isolation and Characterization of Ribonucleoprotein Complexes," pp 103-140 (1994);	
	DQ	Calvio <i>et al.</i> , "Identification of hnRNP P2 as TLS/FUS using electrospray mass spectrometry," <i>RNA</i> 1:724 [1995];	
	DR	Sanger <i>et al.</i> , "DNA sequencing with chain-terminating inhibitors," <i>Proc. Natl. Acad. Sci.</i> , 74:5463 [1977];	
	DS	Collins <i>et al.</i> , "Purification of Tetrahymena telomerase and cloning of genes encoding the two protein components of the enzyme," <i>Cell</i> , 81: 677 (1995);	
	DT	Lendvay <i>et al.</i> , "Senescence mutants of <i>Saccharomyces cerevisiae</i> with a defect in telomere replication identify three additional EST genes," <i>Genetics</i> 144 (1996);	
	DU	Greider and Blackburn, "Identification of a specific telomere terminal transferase activity in Tetrahymena extracts," <i>Cell</i> 43: 405 (1985);	
	DV	Greider and Blackburn, "A telomeric sequence in the RNA of Tetrahymena telomerase required for telomere repeat synthesis," <i>Nature</i> , 337: 331 (1989);	
	DW	Romero and Blackburn, "A conserved secondary structure for telomerase RNA," <i>Cell</i> , 67: 343 (1991);	
	DX	Conrad <i>et al.</i> , "RAP1 protein interacts with yeast telomers <i>in vivo</i> : overproduction alters telomere structure and decreases chromosome stability," <i>Cell</i> , 63: 739 (1990);	
	DY	Fang <i>et al.</i> , "Oxytricha telomere-binding protein: separable DNA-binding and dimerization domains of the γ -subunit," <i>Genes Develop.</i> 7: 870 (1993) and Gray <i>et al.</i> , <i>Cell</i> 67: 807 (1991);	
	DZ	Gottschling and Zakian, "Telomere proteins: specific recognition and protection of the natural termini of Oxytricha macronuclear DNA," <i>Cell</i> 47: 195 (1986);	
		Lamond <i>et al.</i> , "Probing the structure and function of U2 snRNP with antisense oligonucleotides made of 2'-OMe RNA," <i>Cell</i> , 58: 383 (1989);	
Examiner:		Date Considered:	
EXAMINER:		Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

FORM PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office		Attorney Docket No.: 015389-002940	Serial No.: 08/854,050
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)		Applicant: Thomas R. Cech <i>et al.</i>	
		Filing Date: 05/09/97	Group Art Unit: 1806
(37 DFR § 1.98(b))			
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)			
Lingner <i>et al.</i> , "Reverse transcriptase motifs in the catalytic subunit of telomerase," <i>Science</i> 276: 561 (1997).			
		Date Considered:	
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			



FORM PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office				Attorney Docket No: 015389-002940		Serial No.: 08/854,050	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use Several Sheets If Necessary)				Applicant: Thomas R. Cech <i>et al.</i>			
(37 CFR § 1.98(b))				Filing Date: 05/09/97		Group Art Unit:	
U.S. PATENT DOCUMENTS							
Examiner Initials	Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date	
JUN 01 1998							
FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS							
		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation
							Yes No
	FA	WO 96/12811	05/02/96	PCT	C12N	15/54	
	FB	WO 96/40868	12/19/96	PCT	CN12	5/00	
	FC	WO 96/19580	06/27/96	PCT	CN12	15/54	
	FD	WO 98/01542	01/15/98	PCT	C12N	9/12	
	FE	WO 98/01543	01/15/98	PCT	C12N	9/12	
	FF	JP 09154575-A	06/17/97	JAPAN (Abstract Only)	A61K-038/51		X
OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)							

	FG	Nakayama et al., 1997, "TLP1: A Gene Encoding a Protein Component of Mammalian Telomerase Is a Novel Member of WD Repeats Family" <i>Cell</i> 88:875-84
	FH	Harrington et al., 1997, "A Mammalian Telomerase-Associated Protein," <i>Science</i> 275:973-977
	FI	Autexier et al., 1996, (Reconstitution of human telomerase activity and identification of a minimal functional region of the human telomerase RNA" <i>EMBO J</i> 15:5928-35
	FJ	GenBank Accession No. AA281296
	FK	Lingner et al., 1996, "Purification of telomerase from <i>Euplotes aediculatus</i> : requirement of a primer 3' overhang" <i>Proc. Natl. Acad. Sci. USA</i> 93:10712
	FL	Nakamura et al., 1997, "Telomerase Catalytic Subunit Homologs from Fission Yeast and Human," <i>Science</i> 277: 955.
	FM	Counter et al., 1997, "The catalytic subunit of yeast telomerase." <i>Proc. Nat'l Acad. Sci. U.S.A.</i> 94:9202-9207.
	FN	Meyerson et al., 1997, "hEST2, the Putative Human Telomerase Catalytic Subunit Gene, Is Up-Regulated in Tumor Cells and during Immortalization," <i>Cell</i> 90:785-795
	FO	Kilian et al., 1997, "Isolation of a candidate human telomerase catalytic subunit gene, which reveals complex splicing patterns in different cell types," <i>Hum. Mol. Genet.</i> 6:2011-2019.
	FP	Harrington et al., 1997, "Human telomerase contains evolutionarily conserved catalytic and structural subunits," <i>Genes Dev.</i> 11:3109-3115.
	FQ	Weinrich et al., 1997, "Reconstitution of human telomerase with the template RNA component hTR and the catalytic protein subunit hTRT," <i>Nat. Genet.</i> 1997 Dec 1; 17(4): 498-502.
	FR	Bodnar et al., 1998, "Extension of Life-Span by Introduction of Telomerase into Normal Human Cells," <i>Science</i> 279:349-352.
Examiner:		Date Considered:
EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.		

H:\CLIENT\GERONIDS\1449.ALL